
SECTION 2

REGIONAL ECONOMICS

REGIONAL ECONOMICS

This analysis identifies the regional economic impacts of two out of the nine total Long-Term Contract Renewal sequences; an Average year following an Average five-year base condition, and an Average year following a Dry five-year base condition. The regional economic analysis is restricted to these sequences because they are the only sequences that represent long-run conditions. The Input-Output model used in the regional economic analysis assumes a long run equilibrium is reached, therefore it is inappropriate to model short run responses represented by the Wet and Dry year conditions. While the Average year following the Dry five-year base condition is not strictly a long-run scenario, as described in the Agricultural and Land Use and Economics section, there are some regions that will be permanently impacted by a five year series of drought years. Because of this, the results can be considered long run.

The assumptions and baseline data used in this analysis are the same as what was used in the Preferred Alternative. Tables 23 and 24 show the results of the Average year following an Average five-year base condition, Tables 25 and 26 the Average year following a Wet five-year base condition, and Tables 27 and 28 the Average year following a Dry five-year base condition. Tables 23, 25, and 27 present the impacts by economic sectors that are aggregations of Standard Industrial Classification (SIC) industries. Tables 24, 26, and 28 present the regional economic impacts broken out by the source of the impact including reduced agricultural output, changes in net farm income, and changes in M&I water costs. Note that regional economic impacts are not reported for the North Coast or the Central and South Coast regions because the rolling five year average tiered pricing mechanism has no impact on these regions.

AVERAGE YEAR FOLLOWING AVERAGE FIVE-YEAR BASE CONDITION

Table 23 shows the employment, output and income effects on all sectors in each regional economy of the long-term contract renewals. Most of the impacts are felt in the Manufacturing, Trade and Services sectors. These impacts are derived from the impact to net income. The economic impacts by region from each source can be seen in Table 24. Reduction in net income resulting from changes in CVP water cost, groundwater pumping, irrigation costs and changes in crop prices have the greatest impact at the statewide level.

AVERAGE YEAR FOLLOWING DRY FIVE-YEAR BASE CONDITION

Table 27 shows the employment, output and income effects for each regional economy and the State as a whole broken out by the impacted sectors. Table 28 shows how each of the impact sources contribute to the total impact. The reduction in agricultural output in the Sacramento River region relative to the Preferred Alternative dominates the statewide impact.

**REGIONAL ECONOMIC IMPACTS ON ALL SECTORS: AVERAGE YEAR FOLLOWING AVERAGE 5-YEAR
BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

TABLE 23

**REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING AVERAGE 5-YEAR BASE CONDITION
COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

Region and Affected Sector	Employment (# of jobs)		Output (\$MM)		PoW Income (\$MM)	
	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agric., Frst., Fish.	-10	-10	-0.4	-0.5	-0.2	-0.3
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.2	0.0	-0.1
Manufacturing	-10	-20	-1.6	-2.2	-0.6	-0.8
TCU	0	-10	-0.2	-0.9	-0.1	-0.5
Trade	-40	-70	-1.1	-2.1	-0.7	-1.3
FIRE	-10	-20	-0.8	-2.6	-0.5	-1.7
Services	-20	-60	-0.9	-2.8	-0.6	-1.7
Government	0	-10	-0.2	-0.7	-0.1	-0.3
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-90	-190	-5.3	-12.0	-2.8	-6.6
San Joaquin River						
Agric., Frst., Fish.	0	-10	-0.2	-0.3	-0.1	-0.1
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-10	-10	-0.8	-1.1	-0.2	-0.3
TCU	0	-10	-0.3	-0.6	-0.2	-0.3
Trade	-10	-30	-0.4	-1.1	-0.2	-0.6
FIRE	-10	-20	-1.1	-2.1	-0.7	-1.3
Services	-30	-50	-1.2	-2.2	-0.7	-1.3
Government	0	0	-0.2	-0.3	-0.1	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-60	-120	-4.3	-7.9	-2.2	-4.2
Tulare Lake						
Agric., Frst., Fish.	0	0	0.0	0.0	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	0.0	0.0	0.0
Manufacturing	-10	-10	-1.0	-1.3	-0.4	-1.3
TCU	0	0	0.0	-0.2	0.0	-0.2
Trade	-40	-50	-1.0	-1.4	-0.7	-1.4
FIRE	0	0	0.0	-0.4	0.0	-0.4
Services	0	-10	0.0	-0.6	0.0	-0.6
Government	0	0	0.0	-0.1	0.0	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-50	-80	-2.1	-4.1	-1.1	-4.1

**REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING AVERAGE 5-YEAR BASE CONDITION
COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

Note:(1) May differ from sum of elements due to rounding.

Table 24

REGIONAL ECONOMIC IMPACTS ON ALL SECTORS: AVERAGE YEAR FOLLOWING WET 5-YEAR BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION

Region Directly Impacted	Impacts on all Sectors					
	Employment (# of jobs)		Output (\$MM)		PoW Income (\$MM)	
	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agriculture						
Reduced Output	0	-10	-0.4	-0.8	-0.2	-0.4
Reduced Net Income	30	50	1.0	2.6	0.5	1.4
Total Agriculture	20	40	0.6	1.8	0.4	1.0
M&I Water Costs	-60	-130	-3.9	-8.5	-2.0	-4.7
TOTAL 1/	-40	-90	-3.3	-6.7	-1.6	-3.6
San Joaquin River						
Agriculture						
Reduced Output	0	0	-0.2	-0.3	-0.1	-0.2
Reduced Net Income	100	170	3.7	8.1	2.1	4.5
Total Agriculture	90	160	3.6	7.8	2.0	4.4
M&I Water Costs	-80	-150	-5.0	-9.4	-2.6	-5.1
TOTAL 1/	20	10	-1.4	-1.6	-0.6	-0.7
Tulare Lake						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	-30	-40	-1.1	-2.1	-0.6	-1.1
Total Agriculture	-30	-40	-1.1	-2.1	-0.6	-1.1
M&I Water Costs	0	0	0.0	0.0	0.0	0.0
TOTAL 1/	-30	-40	-1.1	-2.1	-0.6	-1.1
Bay Area						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	0	0	-0.1	-0.2	0.0	-0.1
Total Agriculture	0	0	-0.1	-0.2	0.0	-0.1
M&I Water Costs	-60	-130	-4.4	-9.4	-2.4	-5.4
TOTAL 1/	-60	-130	-4.5	-9.6	-2.5	-5.5
California Total						
Agriculture						
Reduced Output	0	-10	-0.5	-1.1	-0.2	-0.6
Reduced Net Income	100	180	3.6	8.4	2.0	4.7
Total Agriculture	100	170	3.0	7.3	1.7	4.2
M&I Water Costs	-200	-410	-13.3	-27.4	-7.0	-15.1
TOTAL 1/	-100	-240	-10.3	-20.1	-5.3	-11.0

Note: (1) May differ from sum of elements due to rounding.

TABLE 25

**REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING WET 5-YEAR BASE CONDITION
COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

Region and Affected Sector	Employment (# of jobs)		Output (\$MM)		PoW Income (\$MM)	
	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agric., Frst., Fish.	0	-10	-0.2	-0.3	-0.1	-0.2
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	0	-10	-0.7	-0.9	-0.2	-0.3
TCU	0	0	-0.2	-0.6	-0.1	-0.3
Trade	0	-10	-0.2	-0.7	0.0	-0.3
FIRE	-10	-20	-0.8	-1.8	-0.5	-1.1
Services	-20	-40	-0.9	-1.9	-0.6	-1.1
Government	0	0	-0.2	-0.5	-0.1	-0.2
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-40	-90	-3.3	-6.7	-1.6	-3.6
San Joaquin River						
Agric., Frst., Fish.	0	0	-0.1	-0.2	-0.1	-0.1
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	0.0
Manufacturing	10	10	0.6	0.8	0.3	0.4
TCU	0	0	-0.3	-0.4	-0.2	-0.2
Trade	60	60	1.0	1.1	0.8	0.9
FIRE	-10	-10	-1.1	-1.2	-0.7	-0.8
Services	-30	-30	-1.2	-1.2	-0.7	-0.7
Government	0	0	-0.2	-0.2	-0.1	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	20	10	-1.4	-1.6	-0.6	-0.7
Tulare Lake						
Agric., Frst., Fish.	0	0	0.0	0.0	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	0.0	0.0	0.0
Manufacturing	0	-10	-0.5	-0.7	-0.2	-0.7
TCU	0	0	0.0	-0.1	0.0	-0.1
Trade	-20	-30	-0.5	-0.7	-0.4	-0.7
FIRE	0	0	0.0	-0.2	0.0	-0.2
Services	0	-10	0.0	-0.3	0.0	-0.3
Government	0	0	0.0	0.0	0.0	0.0
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-30	-40	-1.1	-2.1	-0.6	-2.1

**REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING WET 5-YEAR BASE CONDITION
COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

Region and Affected Sector	Employment (# of jobs)		Output (\$MM)		PoW Income (\$MM)	
	Direct	Total	Direct	Total	Direct	Total
Bay Area						
Agric., Frst., Fish.	0	0	0.0	-0.1	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-10	-10	-1.2	-1.9	-0.4	-0.7
TCU	0	-10	-0.3	-0.8	-0.2	-0.4
Trade	-20	-40	-0.8	-1.6	-0.5	-1.0
FIRE	-10	-10	-1.0	-2.2	-0.6	-1.5
Services	-20	-50	-1.1	-2.6	-0.7	-1.6
Government	0	0	-0.2	-0.3	-0.1	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-60	-130	-4.5	-9.6	-2.5	-5.5
California Total						
Agric., Frst., Fish.	-10	-10	-0.4	-0.7	-0.2	-0.3
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.3	0.0	-0.2
Manufacturing	-10	-10	-1.7	-2.7	-0.5	-1.2
TCU	-10	-10	-0.8	-1.8	-0.4	-1.0
Trade	20	-20	-0.5	-1.9	-0.1	-1.2
FIRE	-20	-40	-2.9	-5.5	-1.8	-3.6
Services	-70	-130	-3.2	-5.9	-1.9	-3.8
Government	0	-10	-0.6	-1.0	-0.3	-0.5
Misc	0	0	-0.1	-0.1	-0.1	-0.1
TOTAL/1	-100	-250	-10.3	-20.1	-5.3	-12.0

Note:(1) May differ from sum of elements due to rounding.

TABLE 26

**REGIONAL ECONOMIC IMPACTS ON ALL SECTORS: AVERAGE YEAR FOLLOWING DRY 5-YEAR
BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

Region Directly Impacted	Impacts on all Sectors					
	Employment (# of jobs)		Output (\$MM)		PoW Income (\$MM)	
	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agriculture						
Reduced Output	-700	-2240	-92.1	-194.5	-30.8	-86.9
Reduced Net Income	130	240	4.7	12.4	2.6	6.9
Total Agriculture	-570	-2000	-87.4	-182.1	-28.2	-80.0
M&I Water Costs	-60	-140	0.4	-0.9	-0.2	-0.5
TOTAL 1/	-630	-2140	-91.8	-191.6	-30.5	-85.2
San Joaquin River						
Agriculture						
Reduced Output	-10	-20	-0.7	-1.5	-0.3	-0.7
Reduced Net Income	-140	-240	-5.4	-11.7	-3.0	-6.5
Total Agriculture	-150	-270	-6.1	-13.2	-3.3	-7.3
M&I Water Costs	-80	-150	0.0	0.0	0.0	0.0
TOTAL 1/	-230	-420	-11.0	-22.7	-5.9	-12.4
Tulare Lake						
Agriculture						
Reduced Output	0	-10	-0.2	-0.5	-0.1	-0.2
Reduced Net Income	-100	-170	-3.6	-7.1	-1.9	-3.8
Total Agriculture	-100	-170	-3.8	-7.6	-2.0	-4.0
M&I Water Costs	0	0	0.0	0.0	0.0	0.0
TOTAL 1/	-100	-170	-4.4	-8.8	-2.3	-4.6
Bay Area						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	-10	-20	-0.6	-1.4	-0.3	-0.8
Total Agriculture	-10	-20	-0.6	-1.4	-0.3	-0.8
M&I Water Costs	-60	-130	-0.5	-1.1	-0.3	-0.6
TOTAL 1/	-70	-150	-5.0	-10.8	-2.8	-6.2
California Total						
Agriculture						
Reduced Output	-710	-2270	-93.0	-196.5	-31.2	-87.9
Reduced Net Income	-120	-190	-4.8	-7.8	-2.6	-4.1
Total Agriculture	-830	-2460	-97.8	-204.3	-33.8	-92.0
M&I Water Costs	-200	-420	-0.1	-1.9	-0.5	-1.1
TOTAL 1/	-1030	-2880	-112.2	-233.8	-41.4	-108.3

Note: (1) May differ from sum of elements due to rounding.

TABLE 27

**REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING DRY 5-YEAR BASE CONDITION
COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

Region and Affected Sector	Employment (# of jobs)		Output (\$MM)		PoW Income (\$MM)	
	Direct	Total	Direct	Total	Direct	Total
Region and Affected Sector	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agric., Frst., Fish.	-450	-630	-26.1	-33.0	-13.4	-16.6
Mining	0	0	0.0	-0.1	0.0	0.0
Construction	0	-30	0.0	-2.1	0.0	-1.2
Manufacturing	-230	-290	-64.9	-73.1	-16.9	-19.8
TCU	0	-120	-0.2	-16.8	-0.1	-7.5
Trade	90	-310	1.6	-13.8	1.2	-8.1
FIRE	-10	-200	-0.9	-22.7	-0.5	-14.6
Services	-20	-500	-1.0	-22.8	-0.6	-13.8
Government	0	-50	-0.2	-7.2	-0.1	-3.5
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-630	-2130	-91.8	-191.6	-30.5	-85.2
San Joaquin River						
Agric., Frst., Fish.	-10	-20	-0.8	-1.2	-0.4	-0.5
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.3	0.0	-0.1
Manufacturing	-30	-40	-3.8	-5.1	-1.4	-1.9
TCU	0	-10	-0.3	-1.2	-0.2	-0.6
Trade	-140	-210	-3.6	-5.8	-2.4	-3.7
FIRE	-10	-30	-1.1	-4.2	-0.7	-2.7
Services	-30	-100	-1.2	-4.3	-0.7	-2.6
Government	0	-10	-0.2	-0.5	-0.1	-0.2
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-230	-420	-11.0	-22.7	-5.9	-12.4
Tulare Lake						
Agric., Frst., Fish.	0	-10	-0.3	-0.4	-0.1	-0.4
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-20	-20	-2.1	-2.7	-0.7	-2.7
TCU	0	0	0.0	-0.4	0.0	-0.4
Trade	-80	-110	-2.1	-2.9	-1.5	-2.9
FIRE	0	-10	0.0	-0.9	0.0	-0.9
Services	0	-30	0.0	-1.2	0.0	-1.2
Government	0	0	0.0	-0.2	0.0	-0.2
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-100	-170	-4.4	-8.8	-2.3	-8.8

**REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING DRY 5-YEAR BASE CONDITION
COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION**

Note:(1) May differ from sum of elements due to rounding.